

-129-

We Claim:

1. An antibody comprising a variant of a parent human Fc region, or portion thereof, wherein the variant comprises at least one amino acid substitution compared to the parent Fc region, and wherein the amino acid substitution is at a position corresponding to a position of the human Fc sequence selected from the group consisting of: 247, 251, 256, 268, 280, 330, 332, 339, 378 and 440.
2. The antibody of claim 1, wherein the substitution is selected from the group consisting of 247L, 247H, 247I, 251F, 256M, 256P, 258E, 268D, 280A, 280K, 330K, 330R, 332E, 332D, 332K, 332R, 339T, 378D and 440Y.
3. The antibody of claim 1, wherein at least one amino acid substitution in the variant Fc region is at a position corresponding to position 332 of the human Fc sequence.
4. The antibody of claim 3, wherein the substitution is selected from the group consisting of 332E, 332D, 332K and 332R.
5. The antibody of claim 1, wherein at least one amino acid substitution in the variant Fc region is 378D.
6. The antibody of any of claims 1-5, wherein the antibody comprising the variant of a parent Fc region mediates antibody-dependent cell-mediated cytotoxicity (ADCC) in the presence of effector cells more effectively than the antibody comprising the parent Fc region.
7. The antibody of claim 6, wherein the antibody comprising the variant Fc region displays relative ADCC specific activity values greater than 100 when the antibody comprising the parent Fc region displays relative ADCC specific activity of 100 when measured with the same assay.

-130-

- 5 8. The antibody of claim 6, wherein the antibody comprising the variant Fc region displays relative ADCC specific activity values less than 100 when the antibody comprising the parent Fc region displays relative ADCC specific activity of 100 when measured with the same assay.
- 10 9. The antibody of any of claims 1-5, wherein the antibody comprising the variant of a parent Fc region mediates complement-dependent cytotoxicity (CDC) in the more effectively than the antibody comprising the parent Fc region.
- 15 10. The antibody of claim 9, wherein the antibody comprising the variant of a parent Fc region displays relative CDC specific activity values greater than 100 when the antibody comprising the parent Fc region displays relative CDC specific activity of 100 when measured with the same assay.
- 20 11. The antibody of claim 9, wherein the antibody comprising the variant of a parent Fc region displays relative CDC specific activity values less than 100 when the antibody comprising the parent Fc region displays relative CDC specific activity of 100 when measured with the same assay
- 25 12. The antibody of any of claims 1-11, wherein the parent Fc region is a class selected from the group consisting of IgG, IgM, IgA, IgD, and IgE.
13. The antibody of any of claims 1-12, wherein the parent Fc region is a subclass selected from the group consisting of IgG1, IgG2, IgG3 and IgG4.
14. The antibody of any of claims 1-13, wherein the antibody is a monoclonal antibody.

-131-

15. The monoclonal antibody of claim 14, wherein the monoclonal antibody comprises two identical heavy chain polypeptides and two identical light chain polypeptides.

5 16. The antibody of any of claims 1-15, wherein the antibody specifically binds human CD20.

10 17. A monoclonal antibody, wherein the monoclonal antibody comprises a light chain polypeptide and wherein the light chain polypeptides comprises a polypeptide with the sequence shown in SEQ ID NO: 57.

15 18. The monoclonal antibody of claim 17, further comprising a heavy chain polypeptide, wherein the heavy chain polypeptide comprises a polypeptide with the sequence shown in SEQ ID NO: 58.

19. A pharmaceutical composition comprising the antibody of any one of claims 1-18.